USER MANUAL

High Power LED PAR, RGB 90 3W LEDs Waterproof Black

(LED-PAR64-3W90BL-RGBW)

catalogue

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Please read over this manual before operating the light

1. Summarize

➢ Summarize

Thank you for purchasing our LED PAR lighting. Please read these instructions carefully before begin and operate the fixtures according to these instructions to avoid any possible damages and accidents causes by misusage.

➢ Products introduce

This led par color-changing projecting light is covered by high strength die-casting aluminum which is able to endure high temperature, designed in a fashion of hydrodynamic form. It takes uses high power 3W, R , G , B , W 4 kinds LED, the color mixing effect is very good, high brightness. Each color can be independently dimmer, fading changes and so on. It uses power switch, performs low weight and consumption, stable capability and long life. The built-in program includes dimmer, strobe, eotic, gradual change, fading and so on. International standard DMX 512 signal is requested.

➢ Packing list

- LED-PAR64-3W90BL-RGBW light 1PC (waterproof power in/out extension cable,waterproof DMX in/out extension cable)
- waterproof power in cable 1PC (with plugs)
- waterproof DMX in cable 1PC(connect to the controller)
- The use manual
- Warranty Card

2. Safety Information

➢ Safety Notes

! Enquire the skilled people before any repair;

! Always make sure disconnect from the power source before setting up, serving and moving;.

! Avoid direct eye exposure to the fixture when it is on;

➢ Safety instuction

● Make sure the power supply voltage are consistent with this lights , Ensure the use of voltage is in the range of the request technical parameter.

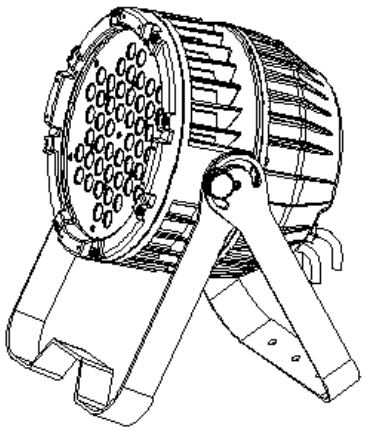
●before the installation , please check the light's fasteners and mechanical structure have been received in good condition and appear no damage.

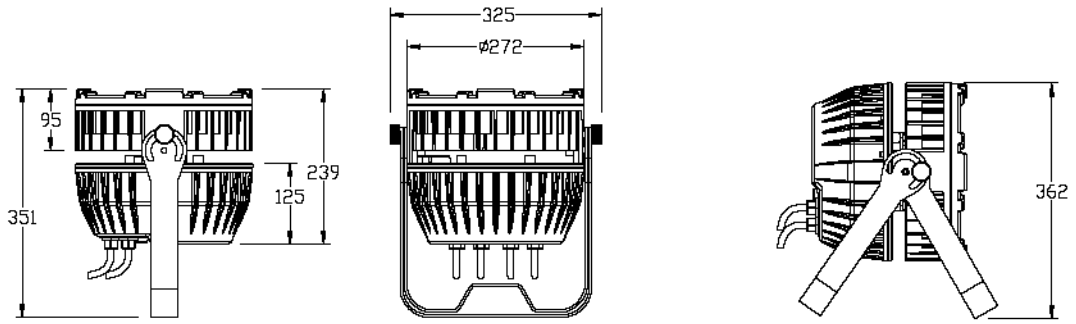
●This light is designed for indoor use, working temperature is lower than 40 degree.

●The fixtures maybe mounted in any position provided there is adequate room for ventilation. Make sure there are no inflammable and explosive items(ornaments) in 0.5 meters away.

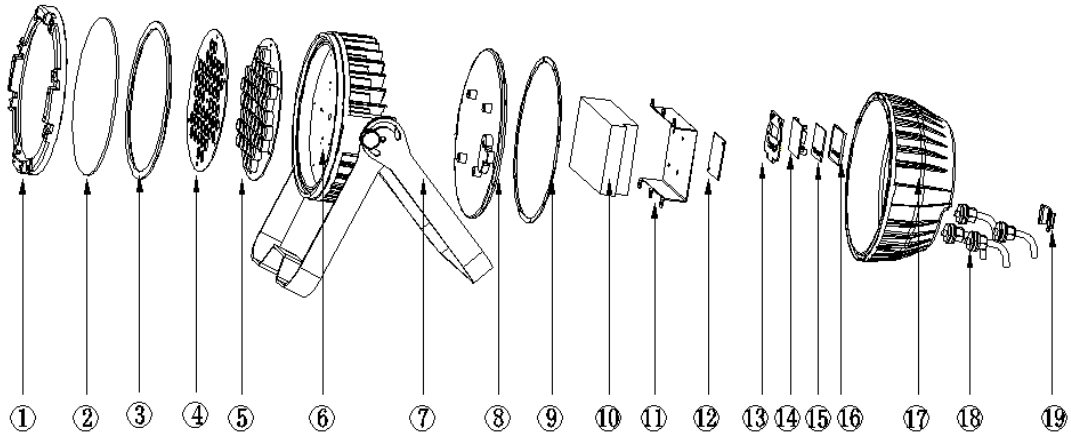
●Yellow / green cabling earthling safety; no flicker when the fixture is working on.

3. Outside Size Picture




325
ø272
95
239
125
351
362

4. Light body structure description



Order number	Item	Quantity	Remarks	Order number	Item	Quantity	Remarks
1	Front cover	1		11	Power main board bracket	1	
2	Glass	1		12	Main board	1	
3	Glass waterproof silicone	1		13	Display platen	1	
4	Lens plate	1		14	display	1	
5	Lamp panel	1		15	Silica gel tabletting	1	
6	bulb holder	1		16	waterproof silicone		
7	bracket	1 set	2PCS	17	Bottom base	1	
8	Bottom case cover	1		18	wire clip	1	
9	Bottom case waterproof silicone	1		19	bumper bracket	1	
10	Power supply	1					

5. Main Function

- Protection rating:IP65,in-door or out-door use
- unique cooling mode: natural convection

- DMX512 Controller，4 button set DMX ID address with led display
- master slave/interconnected multi-machine control
- lens degree: 15º、25º、45º optional
- using switching power supply to protect the LED to work well
- 48*3W　R,G,B,W LED
- Stobe、gradual change、jumping change

6. DMX Control Function

(3CH)

Channel	DMX Value	Control Function	Remark
1CH	0-255	RGB mixing	Hue
2CH	0-255	White diming0-100%	Color Saturation
3CH	0-255	General dimming 0-100%	brightness

Note: In this mode, the color represents visible light, such as red, green, yellow, blue and so on. Color saturation refers to proportion of the main color ,100% saturation means it has reached the solid.Value refers to the purity of the color brightness, 100% is the brightest.

(4CH)

Channel	DMX Value	Control Function	Remark
1CH	0-255	R 0-100%	
2CH	0-255	G 0-100%	
3CH	0-255	B 0-100%	
4CH	0-255	W 0-100%	

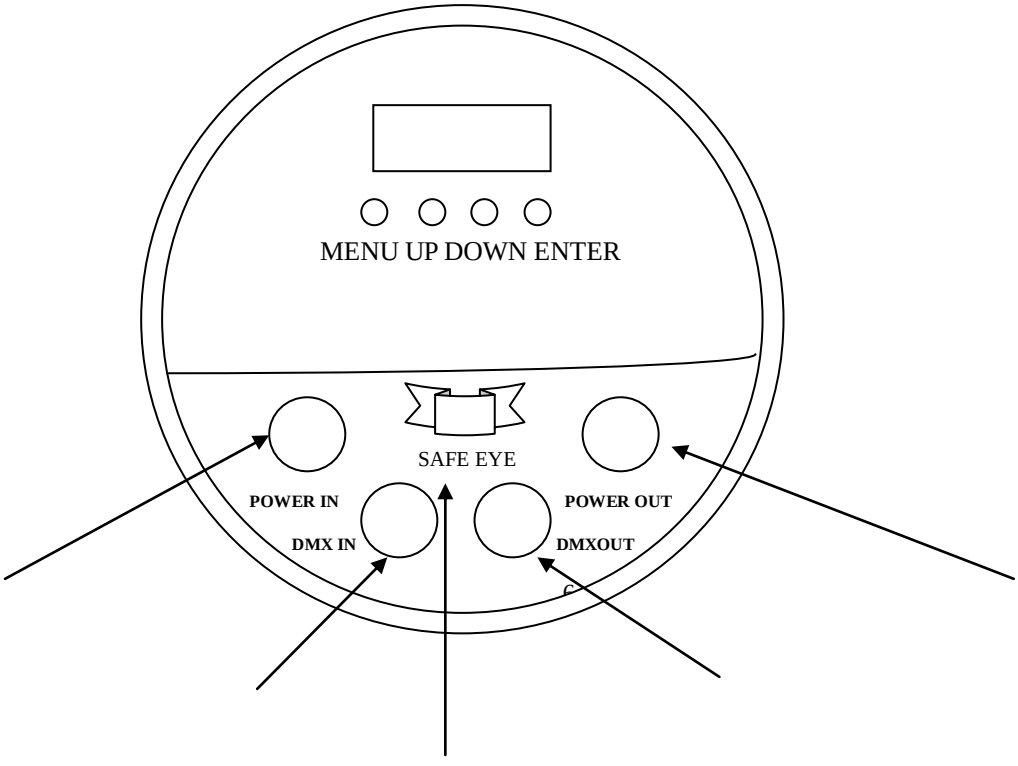
(5CH)

Channel	DMX Value	Control Function	Remark
1CH	0-255	General dimming	
2CH	0-255	R 0-100%	
3CH	0-255	G 0-100%	
4CH	0-255	B 0-100%	
5CH	0-255	W 0-100%	

(8CH)

Channel	DMX Value	Control Function	Remark
1CH	0-255	General dimming	
2CH	0-255	Red Dimming 0——100%	
3CH	0-255	Green Diming0——100%	
4CH	0-255	Blue Dimming 0——100%	
5CH	0-255	White 0——100%	
6CH	0-14	Dimming	When the 7CH above31 ,this function is invalid
	15-255	Strobe Speed	
7CH	0-31	Invalid	
	32-63	From dark to bright	Must use CH1、2、3、4 , 5 otherwise no light ,From the 8CH, start the speed adjustment
	64-95	From bright to dark	
	96-127	From dark—bright—dark	
	128-159	RGB Gradient	From the 8CH, start the speed adjustment
	160-191	dark-bright-dark Automatic	
	192-223	4 colors jumping change	
	224-255	Many color mixing jumping change	
8CH	0-255	Speed adjust (7CH)	

7. Display Operation



Power-in cable **power-out cable**

DMX-in cable **DMX-out cable**

Safety eye

- MENU : access the menu or return to a previous menu option
- ENTER:select the current menu option
- UP:menu selection or parameter increments
- DOWN:menu selection or parameters decrease

8. Manual Instruction

Operating instruction:

1. MENU is used to access the menu or return to a previous menu option. It can not be used to select and store the current menu option. Press UP / DOWN to choose a desired menu item. Here are the operation details :

- ”addr”: DMX mode （A001-A512）
- “SLAV”:slave receive mode
- “CHNd”:DMX channel (3,4,5,8CH)
- ”SP”; built-in program speed change model (SP00-SP15, SP00 is the fastest)
- ”Pr”; Built-in program （Pr00-Pr15 16 program in all）
- ”ASC”; seven colors jumping（AS00-AS15 speed adjustable）
- ”FAdE”: gradual change model（FA00-FA15 speed adjustable）
- ”FLAS”: white color strobe（FL00-FL15 speed adjustable）
- ”rL”: red dimmer （r000-r255,, r255 is the brightest）
- ”gL”: green dimmer（g000- g255, g255 is the brightest）
- ”bL”: blue dimmer（b000- b255, b255 the brightest）

- ”UL”: white dimmer（U000- U255, U255 the brightest）

2. Press ENTER to access the further menu setting. This process can be saved automatically; that means you will enter the process saved previously when you activate the light next time. For example, if you want to choose DMX mode A001, operate as follows:

- Press MENU, go back to the initial setting
- Press UP / DOWN until Addr
- Press ENTER to choose, the display will glinting at this moment
- Press UP / DOWN to change the address code to select A001
- Press ENTER to select and store the current menu options. DMX mode will be stored automatically and the screen will stop glinting.

✓ DMX channel choosing Operation：CHNd mode

- Press Menu, go back to the initial setting
- Press UP/DOWN，until shows “CHNd”
- Press ENTER to access the menu items to select, the screen will now be glinting
- Press UP/DOWN to change the DMX Channel: 3CH、4CH, 5CH、8CH

At last, press ENTER to confirm, if it delay for 3 seconds, DMX channel choosing will be saved, and go back to DMX receive mode(A001); If your press ENTER for short time or not press, delaying for 8 seconds, the DMX channel will select to be saved automatically, and then go back to DMX receive mode(A001)

3. Details of program built inside（Pr- -）

NOTE:Pr14--- Pr30 Can change the content Of SP，correct the speed of jumping change，SP00 is the fastest，SP15 is the slowest

- Pr00--- Pr13 :R,G,B,Wsigle or multi-colors mixing.
- Pr14--- Pr27: corespond to Pr00--- Pr13,add strob.

- Pr28:four colors jumping change.

9. Operating Control Instruction

➢ Master/Slave

Master：The master should always working as a master as long as it is not set in a DMX mode whatever other modes it is. And it send out the signal so that the slave synchronous with it. To avoid the host signal and DMX512 signals interfere with each other, should cut off the DMX512 signals. The signal lines are longer than 60 meters(20 lamps) ,should increase a signal amplifier.

Slave：he Slave must be set in DMX mode and the address code should be A001, to assure receive the master's signals correctly. Only one light can be set as a Master and others are slaves.

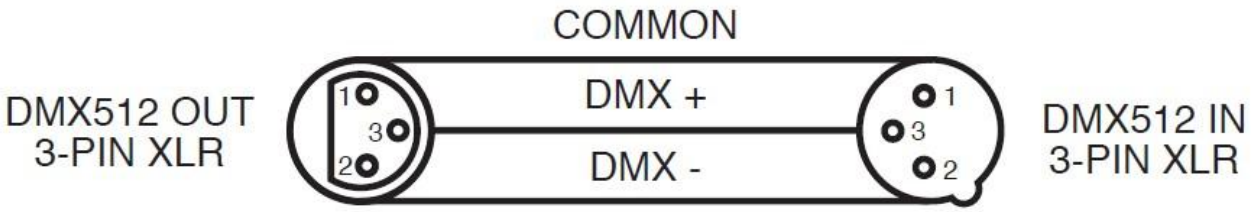
Note: This product uses input and output power cord 2.5 m ㎡ copper core wire, power line in series, when 220V AC should less than 10lights, and 110V AC less than 5 lights! ! !

10. XLR cable connecting

➢ XRL cable：

The stand connection way of the XRL is: one end connect to the male plug ,and the other connect to the female.

XLR Pin Configuration
Pin 1 = Ground
Pin 2 = Data Compliment (negative)
Pin 3 = Data True (positive)



Noted : In order to avoid failures and interference signal transmission , we connect a resistance120Ω (1/4W) at the end of the DMX connecting as below:

Termination reduces signal errors and avoids signal transmission problems and interference. It is always advisable to connect a DMX terminal, (Resistance 120 Ohm 1/4 W) between PIN 2 (DMX-) and PIN 3 (DMX +) of the last fixture.

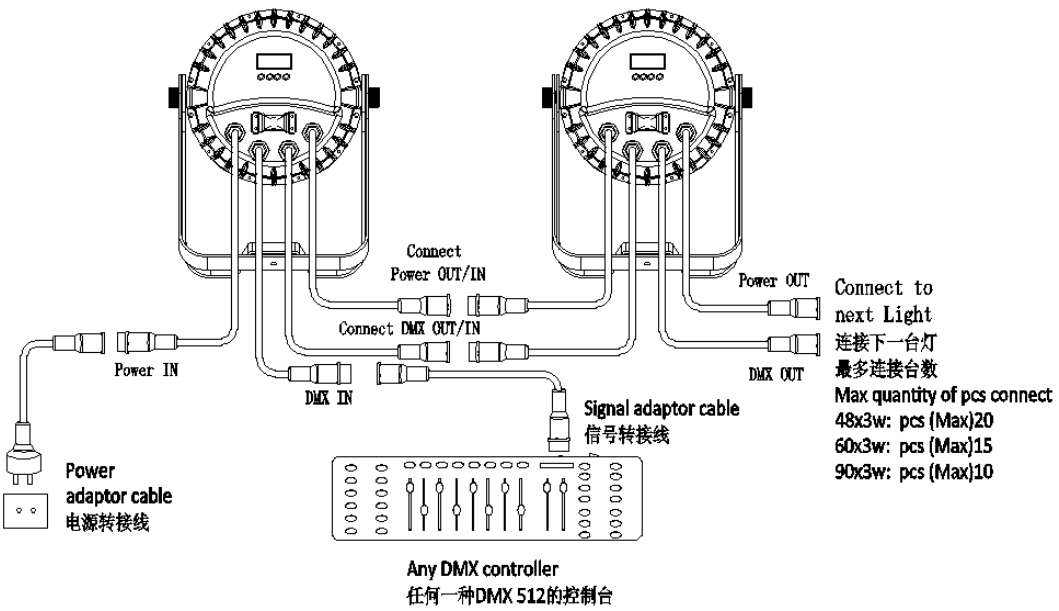
- The Conversion between 3pin and 5 pin XLR

  If the output cable of DMX512 controller is the 5PIN, please use 1pc 5PIN to 3PIN cable

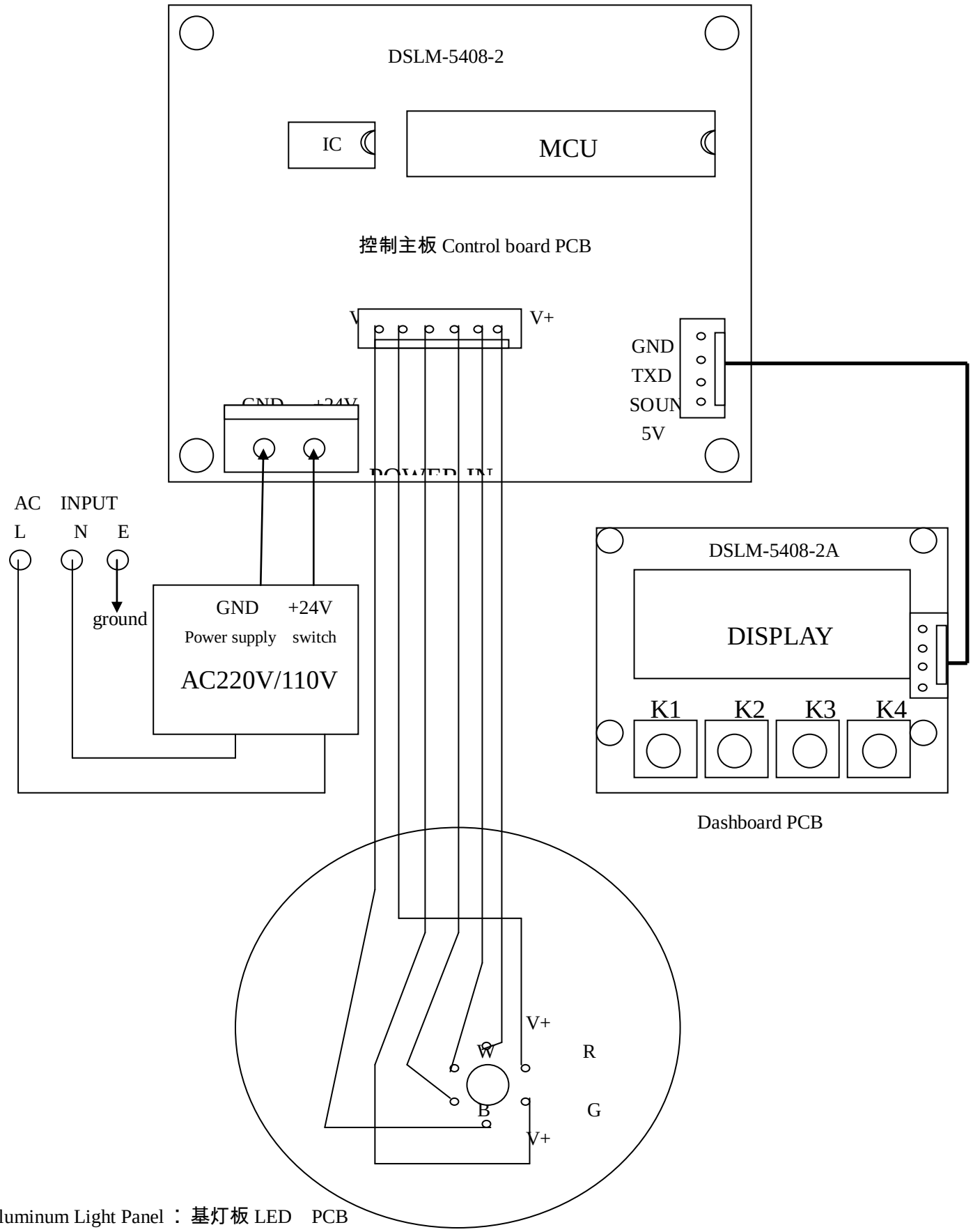
3-Pin XLR to 5-Pin XLR Conversion		
Conductor	3-Pin XLR Female (Out)	5-Pin XLR Male (In)
Ground/Shield	Pin 1	Pin 1
Data Compliment (- signal)	Pin 2	Pin 2
Data True (+ signal)	Pin 3	Pin 3
Not Used		Do Not Use
Not Used		Do Not Use

11. Connecting picture

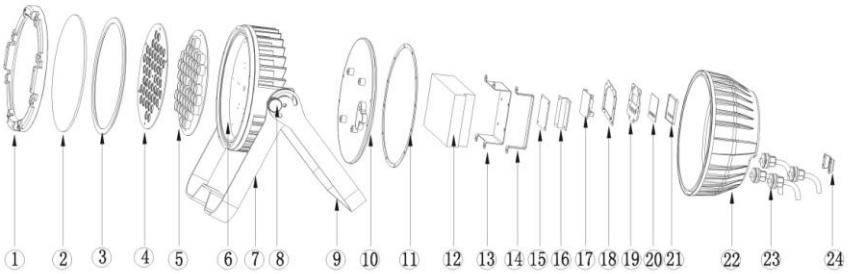
- Light connecting picture :


Connect
Power OUT/IN
Power OUT
Connect to
next Light
连接下一台灯
最多连接台数
Max quantity of pcs connect
48x3w: pcs (Max)20
60x3w: pcs (Max)15
90x3w: pcs (Max)10
Connect DMX OUT/IN
Power IN
DMX IN
DMX OUT
Signal adaptor cable
信号转接线
Power
adaptor cable
电源转接线
Any DMX controller
任何一种DMX 512的控制台

- Great waterproof PAR lamp wiring diagram



12. Exploded views

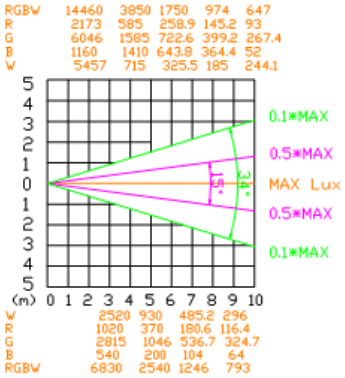


DS-0909B

Order number	Item	Quantity	Remarks
1	Upper cover	1PCS	
2	glass	1PCS	
3	glass waterproof rubber gasket	1PCS	
4	Rubber-headed screw	1PCS	
5	Lens platen	1ASM	Finished product
6	Lampholder	1PCS	
7	inside bracket	1PCS	
8	rubber-headed screw	2PCS	
9	outside bracket	1PCS	
10	Bottom case cover	1PCS	
11	waterproof rubber gasket of bottom case	1PCS	
12	Power supply	1PCS	
13	Power main borad bracket	1PCS	
14	Power tabletting	1PCS	
15	PCB control board	1ASM	Finished product
16	Terminal block holder	1PCS	
17	Display board	1ASM	Finished product
18	screen board	1PCS	
19	fixing base board	1PCS	
20	Transparent PVC silica tabletting	1PCS	
21	Waterproof silica gel of sceen	1PCS	
22	Lamphouse	1PCS	
23	wireclip	1PCS	
24	Insurance bracket	1PCS	

13. illuminance list

18R24G24B24W*3Watt Par light distribution

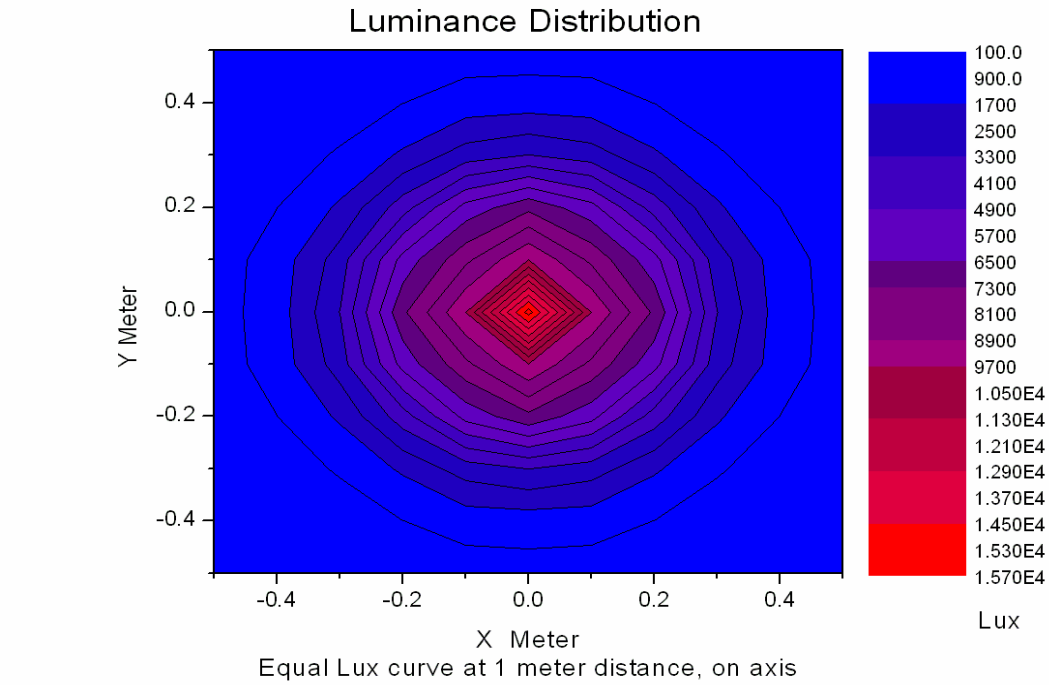


Tipical Chromaticity

Colors	X CIE(1931)	Y CIE(1931)
R	0.7010	0.2990
G	0.1679	0.7340
B	0.1393	0.0321
W	0.3072	0.3258
RGBW	0.2450	0.2178

Formula of Lux to distance on axis

Colors	Formula(x=distance meter, y=Lux)
R	y=8749*power(x,-1.971)
G	y=23725*power(x,-1.951)
B	y=4476*power(x,-1.935)
W	y=20977*power(x,-1.94)
RGBW	y=57015*power(x,-1.949)



Equal Lux curve at 1 meter distance, on axis

14. Problem Analyse

Problem	Checking way
Can not turn on the light	◆ Check the power source plug is in normal or not ◆ Check the switch of the lights is off or on ◆ Check the fuse if in normal
DMX can not control it	◆ Check the DMX cable is connect to the lights or not ◆ Check the DMX512 controller work in normal or not ◆ Check the DMX cable is normal or not ◆ Check if the lights is in DMX mode（A001）
Display not bright	◆ When connect to the electricity ,did the led flash one time? If so , the power source is normal; If not ,please check if the switch and the transformer has power out ◆ Check if the power input of the IC board is normal ◆ Check if the cable connect to the display loose ◆ Change the main board to see if it is normal. ◆ Chang the display
LED not light	◆ When connect to the electricity ,did the led flash one time? If so , the power source is normal; If not ,please check if the switch and the transformer has power out ◆ Check if the power input of the IC board is normal ◆ Check if the cable connect to the display loose ◆ Change the main board to see if it is normal. ◆ Chang the display
	◆ LED is connect by leds in series first, then connect parallel, so please check if the leds is loose

Some of the LED not light	◆ Use the multimeter to check if the led is bright or not, of not, please change the led ◆ check whether current limiting resistor is normal or not ◆ Check constant current IC is normal or not (compared with the normal IC)
Single color leds always bright/not bright	◆ Check the switch of this color is normal or not ◆ Change the IC control board

Noted：only professional persons can do as above！

15. Technical Specification

- Input voltage：AC 170V-264V/47-63HZ
- Output voltage：DC48V
- Consume：300W
- Lamp Type：High Power LED(3W)
- Lamp Spec：R（18PCS）, G（24PCS）, B（24PCS）, W（24PCS）,
- Control Signal：DMX512, master and slaver
- Control mode：stand alone/ DMX/ master and slaver
- Channel：3,4,5,8 CH
- Function Effect：dimmer, strobe, eotic, gradual change
- Beam Angle:45°
- Cooling mode: Natural Convection
- Protection rate:IP65
- Anti-electricity intension：1.5KV
- Insulation Resistance：＞2 MΩ
- Size:：325*272*351mm

- Net Weight：13KG

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